

CLAIM AMENDMENT

IN THE CLAIMS:

Please amend the claims so as to read as follows:

1. (Cancelled, without prejudice)

2. (Cancelled, without prejudice)

3. (Cancelled, without prejudice)

4. (Cancelled, without prejudice)

5. (Cancelled, without prejudice)

6. (Cancelled, without prejudice)

7. (Cancelled, without prejudice)

8. (Cancelled, without prejudice)

9. (Cancelled, without prejudice)

10. (Currently Amended) An optical recording/reproduction apparatus, which records/reproduces information on/from a recording medium having at least one recording layer, by converging light rays from a light source thereon, comprising when the number of recording layers is represented by N , where $N \geq 2$:
- an objective lens for converging light rays from the light source onto the recording medium; and
- a spherical-aberration correcting mechanism for correcting spherical aberration of converged light spots formed on the recording layers,
- wherein, the objective lens is set so that a converged light spot, derived from light rays transmitted through a light-transmitting body having an optical thickness of p_4 and converged, has a minimum spherical aberration,
- the N recording layers comprise a first recording layer, ..., an N th recording layer in succession from the objective lens side, and
- an optical thickness at a mid-point between the first recording layer and the N th recording layer is represented by t_4 p_3 ,
- p_4 and t_4 p_3 are coincident with each other, and a converged light spot formed at the mid-point between the first recording layer and the N th recording layer by the objective lens has a minimum spherical aberration when light rays emitted from the spherical-aberration correcting mechanism have a minimum spherical aberration.

11. (Previously Presented) The optical recording/reproduction apparatus as defined in claim 10,
wherein amounts of spherical aberration of converged light spots on the first recording layer and the Nth recording layer are almost equal to one another.
12. (Previously Presented) The optical recording/reproduction apparatus as defined in claim 10,
wherein the spherical-aberration correcting mechanism includes lens groups, each said lens group being constituted by at least one lens and arranged so that light rays emitted from the spherical-aberration correcting mechanism have a minimum spherical aberration when (i) a lens group gap at a time that the converged light spot formed on the first recording layer has a minimum spherical aberration represented by $DIS(1)$, (ii) a lens group gap at a time when the converged light spot on the Nth recording layer has a minimum spherical aberration represented by $DIS(N)$, and (iii) a lens group gap represented by $dst(3)$ satisfies the relationship;

$$dst(3) = (DIS(1) + DIS(N)) / 2.$$

13. (Currently Amended) An optical recording/reproduction apparatus, which records/reproduces information on/from a recording medium having a single recording layer by converging light rays from a light source thereon, comprising:

an objective lens for converging light rays from the light source onto the recording medium; and

a spherical-aberration correcting mechanism for correcting spherical aberration of converged light spots formed on the recording layer,

wherein, the objective lens is set so that a converged light spot, derived from light rays transmitted through a light-transmitting body having an optical thickness of p4 and converged, has a minimum spherical aberration,

an optical thickness of the recording layer is represented by p5, p4 and p5 are coincident with each other such that a converged light spot formed at the recording layer by the objective lens has a minimum spherical aberration

~~The optical recording/reproduction apparatus as defined in claim 10,~~

~~wherein when the recording medium has only one recording layer for recording/reproducing information that layer has an optical thickness t5 which is equivalent to the optical thickness t4.~~